

MARKED-UP CLAIMS

WHAT IS CLAIMED IS:

1. A method of applying photo-luminescent pigment to a substrate, said method including:

preparing a dry powder formulation comprising, at least, a photo-luminescent pigment and a carrier/fixer;

5 depositing the dry powder formulation onto a substrate surface; and

heating the dry powder formulation to fuse it to the substrate surface.

2. A method as claimed in [any preceding claim] Claim 1 wherein the substrate surface has one of a depression or channel [depressions or channels] adapted to receive the dry powder formulation.

3. A method as claimed in Claim 2 which further includes applying a light reflecting layer to the substrate surface before depositing the dry powder formulation.

4. A method as claimed in [any one of claims 1 to 3] Claim 1 wherein the volume ratio of photo-luminescent pigment to carrier/fixer in the dry powder formulation is such that the fused material exhibits substantially the same strength and  
5 durability properties of the carrier/fixer while still exhibiting the photo-luminescent properties of the pigment.

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5. A method as claimed in Claim 4 wherein the volume ratio is substantially in the range of 1% to 35% of photo-luminescent pigment to carrier/fixer.

6. A method as claimed in [any preceding claim] Claim 1 wherein the dry powered formulation is heated to a temperature recommended by the manufacturer of the carrier/fixer until the formulation is molten.

7. A method as claimed in Claim 6 wherein the formulation is heated to substantially between 160 to 210 degrees centigrade.

8. A method as claimed in Claim 6 [or claim 7] wherein the formulation is heated for approximately 10 to 20 minutes.

9. A method as claimed in [any preceding claim] Claim 1 wherein after heating the formulation is cooled.

10. A method as claimed in [any preceding claim] Claim 1 wherein the carrier/fixer is a heat curable polymer.

11. A method as claimed in [any preceding claim] Claim 1 wherein the dry powder formulation includes small quantities of additives[, such as a de-gassing additive,] to ensure a smooth surface finish.

12. A method as claimed in [any preceding claim] Claim 1 wherein the substrate is one of stamped, extruded [or] and milled [aluminum or] metal.

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13. An apparatus for applying photo-luminescent pigment to a substrate having a surface, said apparatus including:

a hopper adapted to contain a dry powder formulation[;],  
said hopper having at least one [or more orifices] orifice  
5 adapted to allow transfer of the dry powder formulation from the hopper to a substrate surface; and

a guide rail system for locating the substrate surface in both a fixed horizontal plane and a fixed vertical plane below the hopper and orifice; and a heat-curing system for providing  
10 enough heat to turn the dry powder formulation into a molten [mix] mixture.

14. An apparatus as claimed in Claim 13 which also includes a cooling system to cool the molten [mix] mixture.

15. An apparatus as claimed in [any one of claims 13 to 15] Claim 13 which [also] includes a drive system to move the substrate through the apparatus.

16. An apparatus as claimed in [any one of claims 13 to 15] Claim 13 which includes a support roller is mounted directly beneath [the] said orifice [orifice(s)] and said hopper to support the substrate.

17. An apparatus as claimed in [any one of claims 13 to 17] Claim 13 which includes an adjustable mounting bracket adapted to

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enable the hopper to be located in the correct position so that [the orifice(s) lines up] said orifice aligns with the substrate.

18. An apparatus as claimed in [any one of claims 13 to 17] Claim 13 wherein said orifice is adapted to communicate snugly with the substrate surface such that the dry powder formulation is deposited substantially only where required.

19. An apparatus as claimed in [any one of claims 13 to 18] Claim 13 which includes a mechanism for tapping the hopper so that any [rat-holes] voids in the dry powder formulation are re-filled.

***Please delete Claim 20 without prejudice.***

21. An apparatus as claimed in [any one of claims 13 to 20] Claim 13 wherein the heat-curing system is an oven.

22. An apparatus as claimed in [any one of claims 13 to 21] Claim 13 wherein the heat-curing system is a continuous oven process.

23. An apparatus as claimed in Claim [22] 21 wherein the oven includes infra-red heating elements.

24. An apparatus as claimed in [any one of claims 13 to 23] Claim 13 which includes an automatic loading means and automatic unloading means at each respective end of said guide rail system.

***Please delete Claims 25 and 26 without prejudice.***

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27. A substrate bearing photo luminescent material when prepared using a method according to [any one of claims 1 to 12 and 25] Claim 1.

28. A substrate bearing photo luminescent material when prepared using an apparatus according to [any one of claims 13 to 24 and 26] Claim 13.

29. A step nosing[, or insert strip for a step nosing,] bearing photo luminescent material [when] prepared using a method according to [any one of claims 1 to 12 and 25] Claim 1.

30. A step nosing[, or insert strip for a step nosing,] bearing photo luminescent material [when] prepared using an apparatus according to [any one of claims 13 to 24 and 26] Claim 13.

31. A handrail[, or insert strip for a handrail,] bearing photo luminescent material [when] prepared using a method according to [any one of claim 1 to 12 and 25] Claim 1.

32. A handrail[, or insert strip for a handrail,] bearing photo luminescent material [when] prepared using an apparatus according to [any one of claims 13 to 24 and 26] Claim 13.